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EXAMINER

MITCHELL, TEENA KAY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3743

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,720

Applicant(s)

MORRIS ET AL.

Examiner

Teena Mitchell

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-20 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/01/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Gruenke et.al. (5,549,106).

Gruenke in a system for delivery a breathing gas discloses: sensing a parameter associated with the delivery of a breathing gas (Abstract; Fig. 6; Col. 3, lines 9-35 (inhalation/exhalation)); changing a valve position in response to a change in the sensed parameter (Fig. 6); determining a breathing state based on the valve position (Fig. 6); causing a change in the sensed parameter of the breathing gas based on the determined breathing state (Abstract; Col. 3, lines 9-35; Fig. 6; Col. 6, lines 23-67 and Col. 7, lines 1-33).

With respect to claim 2, Gruenke discloses determining a breathing state associated with a valve step position (Fig. 6).

With respect to claim 3, Gruenke discloses determining if a peak valve position has occurred (Fig. 6; Col. 3, lines 18-35).

With respect to claim 4, Gruenke discloses determining if the valve position is equal to or below a peak valve step position (Fig. 6; Col. 3, lines 18-35 (based on tracking of inhalation/exhalation)).

With respect to claim 5, Gruenke discloses providing at least a first breathing gas state (the examiner is reading this state to be inhalation/exhalation cycle) in response to at least one valve position (Fig. 6).

With respect to claim 6, Gruenke discloses providing at least a second breathing state (the examiner is reading this state to be inhalation/exhalation cycle) in response to at least one other valve position (Fig. 6).

With respect to claim 7, Gruenke discloses sensing a pressure associated with the delivery of a breathing gas to a patient interface (Col. 3, lines 18-35); changing a valve position (16) in response to a change in the sensed pressure (Fig. 6); detecting a start of inhalation state by determining if the valve position has increased beyond a start of inhalation state threshold value (20; Fig. 6); detecting an end of inhalation state by determining if the valve position has fallen below an end of inhalation state threshold value (20; Fig. 6); delivering the breathing gas at least a first positive pressure above ambient pressure after detection of the start of inhalation state (Fig. 6); and delivering the breathing gas at least at a second pressure after detection of the end of inhalation state wherein the second pressure is less than the first pressure (Col. 7, lines 8-25).

With respect to claim 8, Gruenke discloses determining the duration of an exhalation state based by measuring the time between the start of the inhalation state and the end of the inhalation state (Fig. 6).

With respect to claim 9, Gruenke discloses delivering the breathing gas at a substantially ambient pressure for at least a portion of an exhalation state following the end of inhalation state (Fig. 6; Col. 3, lines 18-35; Columns 6-16).

With respect to claim 10, Gruenke discloses delivering the breathing gas at a substantially ambient pressure for at least a first portion of an exhalation state and delivering the breathing gas at a third pressure for at least a second portion of the exhalation state wherein the third pressure is between the first and second pressure (Fig. 6).

With respect to claim 11, Gruenke discloses delivering the breathing gas from the second pressure to the first pressure according to a predefined function and prior to the detection of the next start of inhalation state (Fig. 6; function is pressure changes denoting inhalation/exhalation).

With respect to claim 12, Gruenke discloses delivering the breathing gas according to a function that raises the pressure from the second pressure to the first pressure prior to the detection of the start of inhalation (Fig. 6).

With respect to claim 13, Gruenke discloses determining a breathing state associated with a valve step position (Fig. 6).

With respect to claim 14, Gruenke discloses determining if a peak valve step position has occurred (Fig. 6).

With respect to claim 15, Gruenke discloses determining if the valve position is equal to or below the peak valve position (Fig. 6; 20).

Allowable Subject Matter

Claims 16-20 are allowable over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter: The overall combination of the pressure sensor, blower, valve, and controller with the defined first-sixth set of instructions is neither anticipated nor rendered obvious by the prior art of record.

Conclusion

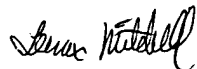
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The balance of art is cited to show systems for delivery of a breathing gas: 6,752,151; 6,766,800; 2002/0104536; 6,349,724.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teena Mitchell whose telephone number is (571) 272-4798. The examiner can normally be reached on Monday-Friday however the examiner is on a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Teena Mitchell
Examiner
Art Unit 3743
January 2, 2005